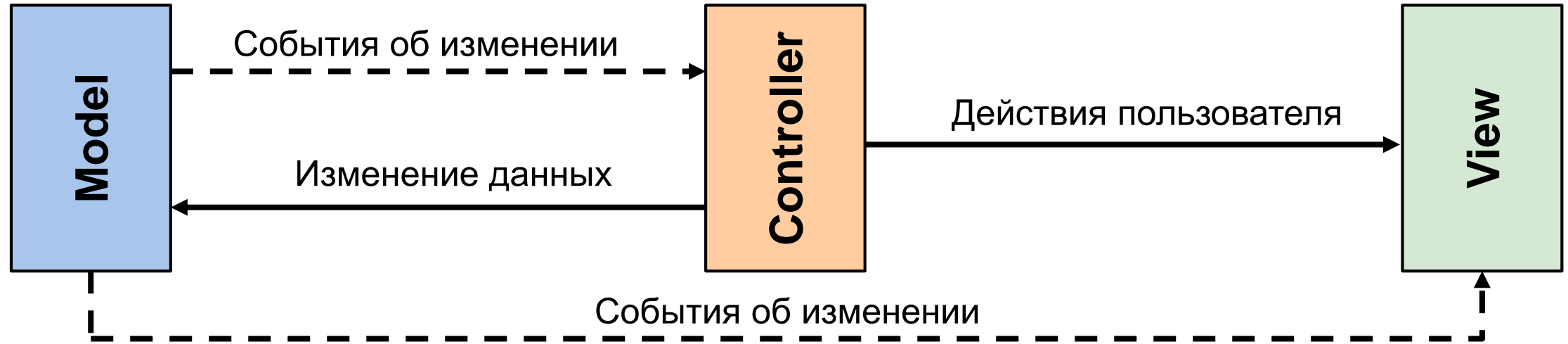




# **Kotlin** for Android Bootcamp 2021



# MVC (Model-View-Controller)

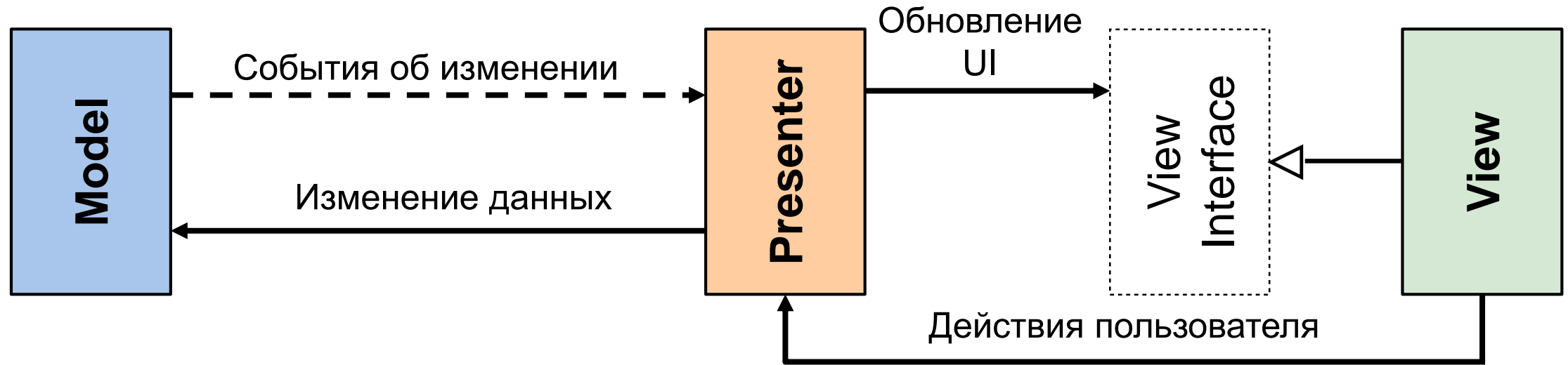


## Недостатки

- ◆ Сложное Unit-тестирование
- ◆ Слабое разделение ответственности



# MVP (Model-View-Presenter)



## Недостатки

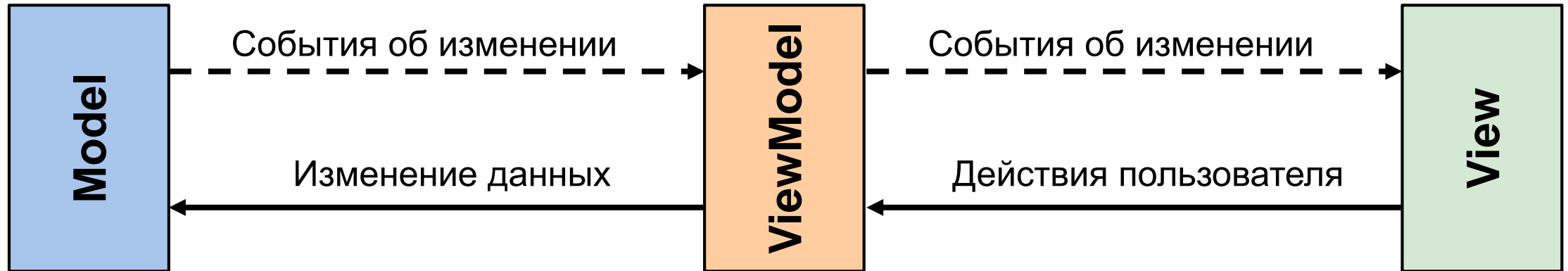
- ◆ Необходимо создавать и поддерживать интерфейсы View
- ◆ Лишний шаблонный код

## Библиотеки

- ◆ Moxy



# MVVM (Model-View-ViewModel)



## Преимущества

- ◆ Простота тестирования
- ◆ Разделение ответственности

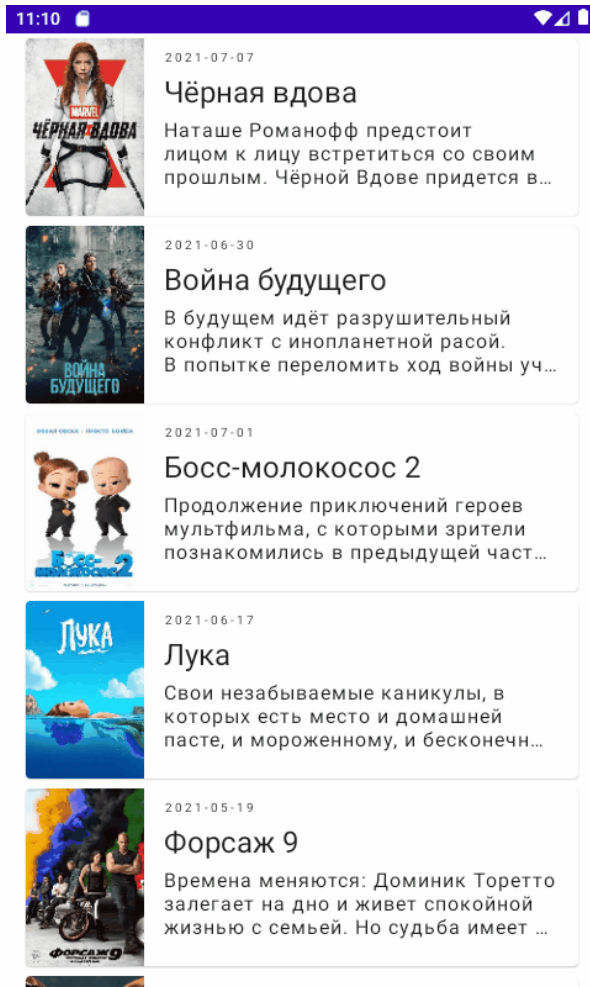
## Библиотеки

- ◆ Android Architecture Components

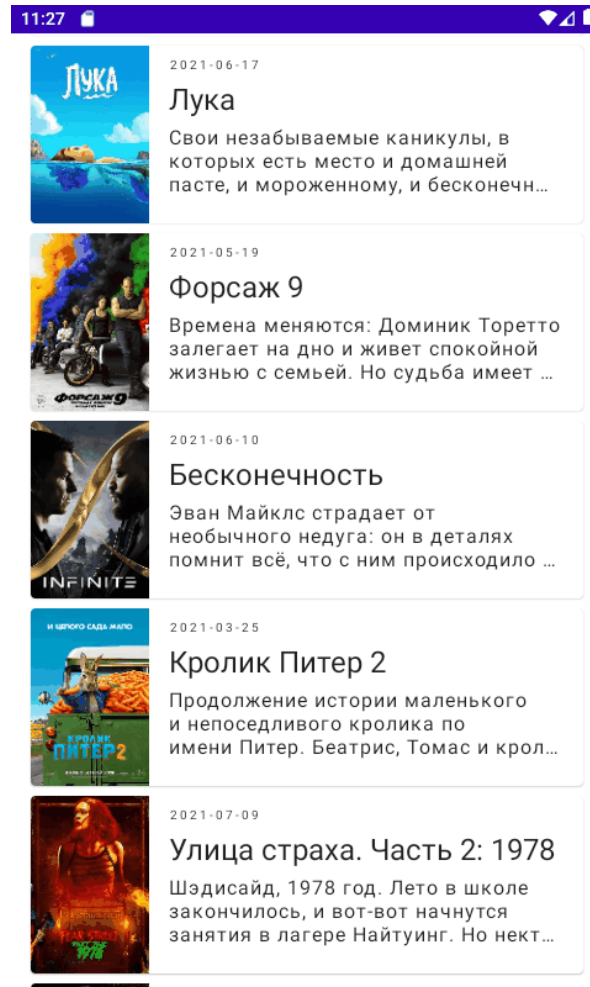


# Приложение «Просмотр фильмов»

## Главный экран



## Экран фильма



## Библиотеки и API

```
// API – The Movie DB  
https://api.themoviedb.org/
```

```
// LiveData + MVVM  
implementation "androidx.lifecycle:lifecycle-livedata-ktx:$l_ver"  
implementation "androidx.lifecycle:lifecycle-viewmodel-ktx:$l_ver"
```

```
// Room database  
implementation "androidx.room:room-runtime:$room_version"  
kapt "androidx.room:room-compiler:$room_version"
```

```
// Paging3  
implementation "androidx.paging:paging-runtime-ktx:$paging_version"
```

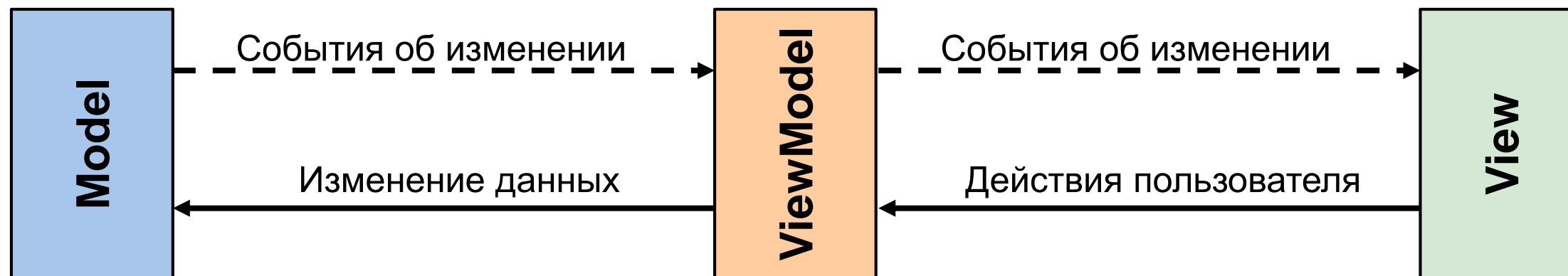
```
// Retrofit2  
implementation "com.squareup.retrofit2:retrofit:$retrofit_version"  
implementation "com.squareup.retrofit2:converter-gson:$retrofit_version"
```

```
// Image - Picasso  
implementation 'com.squareup.picasso:picasso:2.8'
```

```
// DI - Koin  
implementation "io.insert-koin:koin-core:$koin_version"  
implementation "io.insert-koin:koin-android:$koin_version"  
implementation "io.insert-koin:koin-android-compat:$koin_version"
```

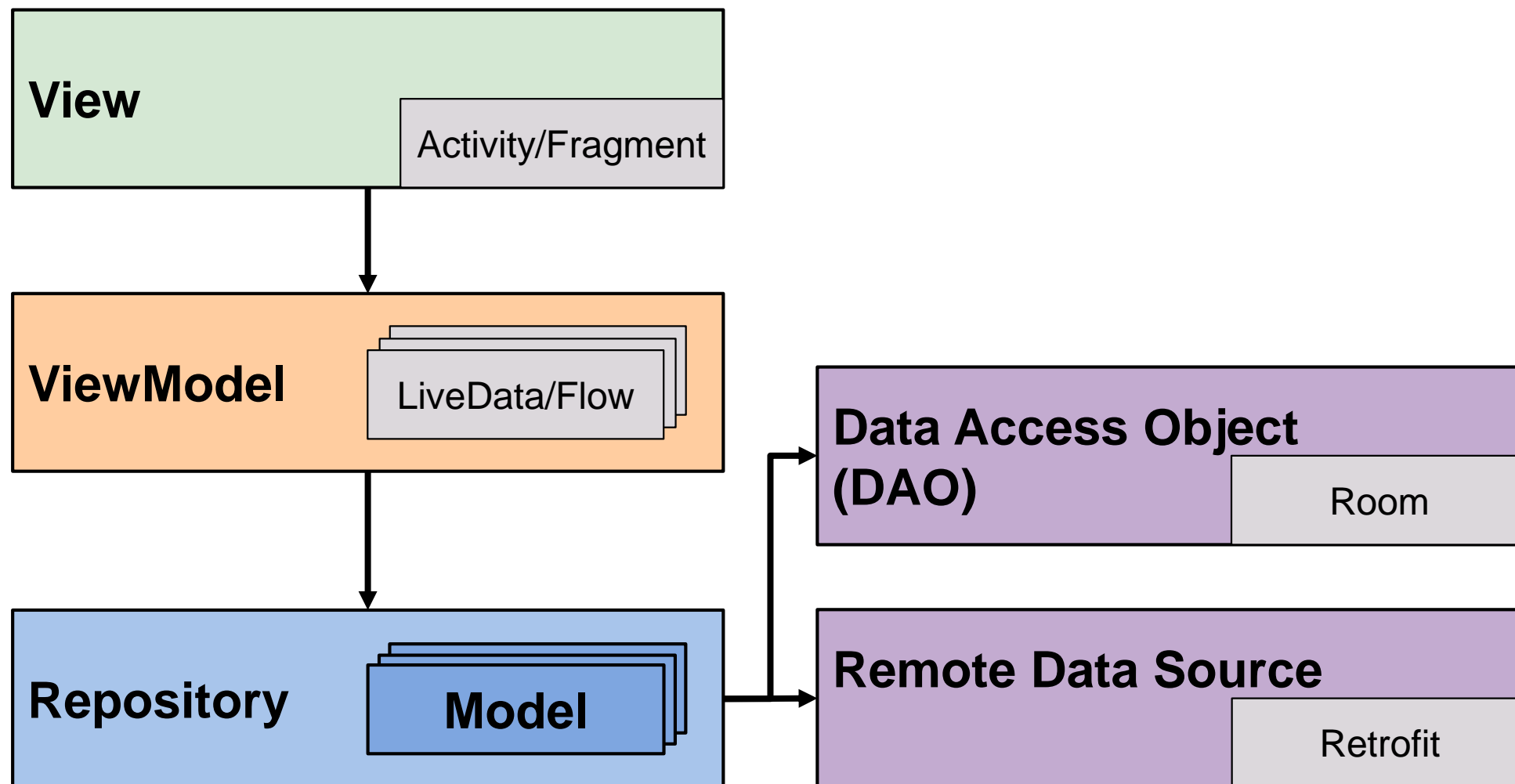


# MVVM (Model-View-ViewModel)





# Архитектура приложения





# DI (Dependency Injection) - Koin

## Было

```
// Repository.kt
class Repository(
    private val api : AppApi
) {
    ...
}

// App.kt
class App : Application() {
    override fun onCreate() {
        super.onCreate()
        api = Retrofit. ...
    }

    companion object {
        lateinit var api: AppApi
        private set
    }
}

// MainActivity.kt
class MainActivity : AppCompatActivity() {
    private lateinit var repository by lazy {
        Repository(App.api)
    }
    ...
}
```

## Стало

```
// Repository.kt
class Repository(
    private val api : AppApi
) {
    ...
}

// AppModule.kt
val appModule = module {

    single { Retrofit. ... }

    single { Repository(get()) }
}

// MainActivity.kt
class MainActivity : AppCompatActivity() {
    private val repository : Repository by inject()
}
```





## GET /movie/{movie\_id}

```
{
  "backdrop_path": "/image.jpg",
  "poster_path": null,
  "budget": 63000000,
  "id": 550,
  "overview": "Long description...",
  "release_date": "1999-10-12",
  "revenue": 100853753,
  "runtime": 139,
  "popularity": 0.5,
  "status": "Released",
  "title": "Fight Club",
  ...
}
```

## GET /movie/{movie\_id}/credits

```
{
  "id": 550,
  "cast": [
    {
      "name": "Edward Norton",
      "profile_path": "/image.jpg",
      "character": "The Narrator"
    },
    ...
  ],
  "crew": [ {...}, ... ]
}
```